

## ON THE OCCURRENCE OF *OPHIOPHAGUS ELAPS*, THE SNAKE-EATING HAMADRYAD, IN SINGAPOE.

SHORTLY after my arrival in Singapore in May last I had the good fortune to make the acquaintance of Mr. Wm. Davidson, Curator of the "A. O. Hume" Museum at Simla and a naturalist of extensive information, who was here on a visit. He was greatly interested in the prospects of our infant Museum and in the course of several conversations with him, I mentioned my intention, when time permitted, of studying the Ophiology of the island and peninsula,—offering as it does a tempting field to naturalists, inasmuch as it appears to be as yet almost unworked. Amongst the encouraging remarks which he made was a careful injunction to keep a good look-out for any specimens of Günther's celebrated Hamadryad, the *Ophiophagus Elaps*, which had the reputation, not only of eating the formidable *Cobra di Capello*, but of being the fiercest Asiatic reptile known to exist; inasmuch as cases are on record of its having chased men for a distance of a mile or more, moderate-sized rivers even forming no impediment to its revengeful pursuit. I was therefore naturally led to make extensive enquiries both amongst the natives and those friends whom a similar interest in Natural History had led to study the occurrence and habits of our little known *Ophidia*, and these enquiries have been rewarded by a gratifying success. That I am not "telling a twice-told tale" in bringing this reptile to your notice may be shewn by a quotation from Dr. Oxley who compiled the best existing sketch of the Zoology of the island, and who says "Snakes are not numerous in Singapore, the most common is a dark cobra. I believe this, with a trigonocephalus, are the only well authenticated venomous species in the Island." Meanwhile a slight sketch of all that can be learned on the spot concerning the formidable reptile under notice may be of interest.

The Raffles Library, though fairly provided with popular works on Natural History does not of course pretend to furnish specialists with works bearing on the particular study in which they may be engaged; and I was fortunate in finding on its shelves even three works which gave me some information on the subject I had chosen for enquiry. Two of these—Figuier's "Reptiles and Birds" and Woods' "Reptiles" contain only

passing notices of the snake in question ; but Dr. Fayrer's magnificent work on the *Thanatophidia* or poisonous snakes of the Indian peninsula furnishes the fullest information respecting the appearance, habits and powers of its Indian congener. Without this latter work, indeed, positive identification would have been almost impossible, so necessary are accurate engravings to all who would endeavour to satisfactorily determine the species or family of animals hitherto undescribed, as our "Fellow Colonists" in Singapore. Let me therefore summarize the accounts given in these books of the formidable serpent I am about to describe :—

Louis Figuier's works will be familiar to many hearers. Covering a vast extent of ground they are essentially "popular" and as such of value, though it is seldom that the specialist can, in these lively volumes, find much that will serve his purposes in the way of scientific accuracy. I was however glad to find (as a beginning,) that M. Figuier's English Editor (Mr. Gillmore) had added to the original volume an interesting paragraph respecting the Hamadryad under notice. He describes it as having a less developed hood than the true cobra, and having a single small tooth placed at some distance behind the fang. The only species he says, "attains to thirteen feet in length and is proportionably formidable being much less timid and retiring in its habits than the Cobras of the genus *Naja*. It preys habitually on other snakes and seems to be more plentiful eastward of the Bay of Bengal than it is in India." Mr. Gillmore then cites instances of its capture in Burmah &c., mentioning a case in which an elephant succumbed to its poison in three hours, and he concludes his brief notice by stating that "it appears not to be uncommon in the Andaman islands, while its range of distribution extends though the Malay countries to the Philippines and to New Guinea." This is in fact all that is said of the most deadly reptile inhabiting the Asiatic continent. The statement that it extended "through the Malay countries, however, justified me in believing that I should eventually come upon a more detailed description. Mr. David on informed me that museum specimens were rare from two causes ; one, that few natives acquainted with its terrible powers cared to attempt its capture ; the other that when a specimen was observed, such strenuous efforts were made to destroy the reptile, that its after preservation as a specimen was impossible. A headless or crushed snake presents but a sorry object, and the outward resemblance of the *Hamadryad* to innocuous species has, I doubt not, led before this to its rejection by these unacquainted with its (Museum) rarity.

The next authority I consulted was Mr. Woods' volume on Reptiles. This fascinating writer leaves few subjects wholly untouched, though he of course also sacrifices detail to suit the popular nature of his works. Taking his volume as we find it, however, I was glad to come across the following notice of our friend.

"The serpent-eating Hamadryad or *Hamadryas elaps*, is notable for the peculiarity from which it derives its name. It feeds almost wholly on reptiles, devouring the lizards that inhabit the same country, and also living largely on snakes. Dr. Cantor says of this Serpent that it cannot bear starvation nearly so well as most reptiles, requiring to be fed at least once a month. 'Two specimens in my possession were regularly fed by giving them a serpent, no matter whether venomous or not, every fortnight. As soon as this food is brought near, the serpent begins to hiss loudly, and expanding its hood, rises two or three feet, and retaining this attitude as if to take a sure aim, watching the movements of the prey, darts upon it in the same manner as the Naga Tripudians (*i. e.* the cobra) does. When the victim is killed by poison, and by degrees swallowed, the act is followed by a lethargic state, lasting for about twelve hours."

"The Hamadryad is fond of water, will drink, and likes to pass the tongue rapidly through water as if to moisten that member. It is a fierce and dangerous reptile, not only resisting when attacked, but even pursuing the foe should he retreat, a proceeding contrary to the general rule among serpents. The poison of this creature is virulent in action, a fowl dying in fourteen minutes, and a dog in less than three hours after receiving the fatal bite, although the experiments were made in the cold season, when the poison of venomous snakes is always rather inactive. The poisonous secretion reddens *litmus* paper very slightly, and, as is the case with most serpent poisons, loses its efficacy by being exposed to the air. The native Indian name of the Hamadryad is *Sunkr Choar*."

"The colour of this snake is generally of an olive hue, anburn and pale below, but there is a variety marked with cross-bands of white. It is large species, varying from four to six feet in length, while some specimens are said to reach ten feet."

As might have been expected Dr. Fayrer's work gives far more particular details, which I proceed to quote. They embody all that is known of the Indian species:—"This is probably the largest and most formidable venomous snake known. It grows

to the length of twelve or fourteen feet, and is not only very powerful, but also active and aggressive. It is hooded like the Cobra, and resembles it in its general configuration and characters.

Günther's definition of it is as follows :—" Body rather elongate ; tail of proportionate length ; head rather short, depressed, scarcely distinct from neck, which is dilatable. Occipitals surrounded by three pairs of large shields, the two anterior of which are temporals. Nostril between two nasals. Lareal none ; one or two præ-three post-oculars. Scales smooth, much imbricated, in transverse rows, in fifteen series round the body, but it many more round the neck ; those of the vertebral series rather larger than the others."

" Ventrals more than 200, anal entire ; anterior sub-candals simple, posterior two rowed, sometimes all bifid. Maxillary with a large fang in front, which is perforated at the end, showing a longitudinal groove in front ; a second, small, simple tooth at some distance behind the fang. The colour of this snake varies according to age and locality. The adult is some shade of olive green or brown. According to Günther it is :—

" Olive green above ; the shields of the head, the scales of the neck, hinder part of the body and of the tail edged with black ; trunk with numerous oblique, alternate black and white bands converging towards the head ; lower parts marbled with blackish, or uniform pale greenish." This variety is found in Bengal, Assam, the Malayan Peninsula, and Southern India.

" Brownish olive, uniform anteriorly, with the scales black edged posteriorly ; each scale of the tail with a very distinct white, black-edged ocelles ; as in *Ptyas mucosus*."

" This variety is not found in Bengal ; Günther says it is found in the Philippine Islands, and perhaps in Burmah."

" Uniform brownish black, scales of the hinder part of the body and of the tail somewhat lighter in the centre ; all the lower parts black, except the chin and throat, which are yellow." This variety is found in Borneo.

" Young specimens have a much more varied coloration ; they are black, with numerous white, equidistant, narrow cross bands descending obliquely backwards ; head with four white cross-bands ; one occupies the extremity of the throat, the second across the posterior frontals, third across the crown of the head,

behind the orbit; the fourth across the occiput to the angle of the mouth; the two latter bands are composed of oval spots.

"In a specimen from the Anamallay Mountains the belly is black, and the white bands extend across, being wider than on the back; in a second specimen, of which the locality is unknown, the belly is white, each ventral having a blackish margin. The young *Ophiophagus* might well be mistaken for a snake of another genus.

"Major Beddome says the young *Ophiophagus* is very like the *Dipsas Dendrophila*, an innocent snake. The shields surrounding the occipitals are large, and give a distinctive character to the snake. There is one præ-orbital, seven upper labials, the third and fourth entering into the orbit, the third the largest, the seventh and eighth very low; temporals large, 2 by 2; ventrals 215-262; sub-caudals 80-100; the number of entire anterior sub-caudals varies much."

"The *Ophiophagus* is probably the largest and most deadly of the thanatophidia; fortunately, though widely distributed it is not very common. According to Günther it is found in almost every part of the Indian continent; in the Andaman and Philippine Islands, in Java, Sumatra, Borneo, and according to Dumeril in New Guinea. Major Beddome of Madras says he has killed one nearly fourteen feet in length near Cuttack in Bengal, where it is common. I had a living specimen of the dusky variety from Rangoon, nearly twelve feet in length."

"The *Hamadryas*, says Dr. Cantor, is very fierce, and is always ready not only to attack, but to pursue, when opposed; this too is a conspicuous trait in the Tenasserim serpent."

"As its name implies, it feeds upon other snakes, though probably when its usual food is not forthcoming, it is contented with birds, mammals, fish, frogs, &c.

"It resembles the Cobra, except that it is longer in proportion to its size, and its hood is relatively smaller; it is, however more graceful in its movements, and turns more rapidly. It is occasionally seen with the snake-charmers who prize it highly as a show; but they say it is exceedingly dangerous to catch, and difficult to handle before its fangs are removed."

It will be noted in the foregoing description that the "brownish olive variety, uniform anteriorly with the scales black-edged posteriorly" is referred only to the Philippine Islands and Burmah.



The specimen before us, however, is undoubtedly that variety and as such is of considerable interest, though the black marks between the scales are less defined than in Dr. Fayrers admirable drawing.

Such being all the available information I was able to collect on the subject of the Hamadryad you will easily understand that I was pleased to make the acquaintance of two gentlemen of this place, who had for some years devoted themselves to collecting and preserving such objects of Natural History as the extensive grounds surrounding their house in Sirangoon Road allowed them to capture. I mentioned to them my desire to come across a veritable specimen of *O. Elaps* and in a very few days was informed that they had as they believed one of these snakes in their collection. I was invited to inspect it and at first sight we had no doubt of the correctness of the identification. A detailed comparison of their specimen with Dr. Fayrer's plate in his "Thanatophidia of India" convinced me that the sought-for reptile was before us. I subjoin the narrative of its capture *verbatim* as furnished.

"My mandore "Manis" remembers the capture of the snake very well, as he had a very narrow escape of being bitten. The attack was quite unprovoked; in fact the first sign of the snake's presence was a loud hiss, and the sight of the snake's head raised in the air on a level with his (the mandore's) breast. By jumping smartly back he evaded the spring of the hamadryad and succeeded by means of bamboos close at hand, and with the aid of the other gardeners close by, in getting the snake held down to the ground until a noose was slipped round his head, in which state he was placed alive in a large bottle.

"I saw the snake alive in the bottle and it was only just dead from suffocation when I poured in the spirit to preserve it.

The mandore did not see the snake before, as it was coiled in a recess amongst the roots of a large soontal tree about 15 yards from our house, and he was approaching the house from the other side of the tree; the snake made his spring just as the man passed by. The man had been thirty years in Singapore at least (he is a Bavian,) but had never seen this sort of snake before. He knew however at once from descriptions given him by old Malays, and by men who lived in the jungle that it was a Tudong-korê kûning. He had often heard of this snake and knew it to be very deadly in its bite. He had heard that it was also called "Ular-muri" but does not think this last the correct name, as he says it is evidently allied to the Cobra;

he called it "Ular tudong-itam-kechil." The mandore states that he remembers seeing a snake something like this about six feet long, also hooded but black in color, shot by my father about twenty years ago; but thinks that was only a very large and old cobra. He says he has heard that formerly these hamadryads were not so rare as they are now, but they were always hard to get a sight of, as when men came across them they always smashed them up with their sticks, or whatever weapons they might have with them. He had also heard of deaths resulting from their bites. As I said before, I saw, in company with my mother and father, this snake alive, and my mother hearing the noise made by the natives, ran out of the house about 2 p. m. and saw the snake being noosed prior to being put in the bottle. Whilst in the bottle its ferocity remained unabated, and the sight of a finger or stick was enough to make it bite viciously at the object."

The reference to the similar snake, black in colour, may point to the existence of what is known as the dusky variety of the hamadryad in Singapore. I can only say that in such a case it will be extremely interesting to meet with a specimen, though its greater resemblance to the ordinary cobra deprives it of the claim to attention made by the variety under notice, which might be mistaken by the uninitiated for a harmless serpent—a proof of which is afforded by the fact that our best known local sportsman has himself twice seen the reptile without being aware of its deadly qualities.

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